BEFORE

THE PUBLIC SERVICE COMMISSION OF

SOUTH CAROLINA

DOCKET NO. 95-715-G - ORDER NO. 98-811

OCTOBER 26, 1998

IN RE: Application of Piedmont Natural Gas Company for an Adjustment of its Rates and Charges and for Approval of Revised Depreciation Rates.	))))	ORDER ON REMAND

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I. INTRODUCTION

This matter is before the Commission on remand from the South Carolina Supreme Court.

On May 8, 1995, Piedmont Natural Gas Company, Inc. ("Piedmont" or the "Company") filed an application with the Commission seeking an increase in its natural gas rates. The Commission set the application for hearing and ordered Piedmont to provide public notice of its filing. Philip S. Porter, Consumer Advocate for the State of South Carolina (the "Consumer Advocate") was the only intervenor. Piedmont's application was investigated by the Commission Staff, and testimony was filed by Piedmont, the Commission Staff and the Consumer Advocate. A hearing was held on October 9 and 10, 1995, at which time the testimony of the parties was introduced into evidence and the witnesses were subjected to cross-examination.

On November 7, 1995, the Commission issued an order (the "November 7, 1995 Order") approving some, but not all, of Piedmont's request for an increase. On or about November 28, 1995, the Consumer Advocate filed a Petition for Rehearing and/or

Reconsideration (the "Petition for Rehearing"). The Petition for Rehearing was denied by Order issued on December 29, 1995.

The Consumer Advocate appealed the Commission's orders to the circuit court. A hearing was held before Honorable Thomas J. Ervin on May 8, 1997, and on May 20, 1997, Judge Ervin affirmed the Commission's orders ("Circuit Court Order").

The Consumer Advocate appealed the Circuit Court Order affirming the Commission's orders to the South Carolina Supreme Court. In that appeal, the Consumer Advocate contended that the circuit court erred in upholding the Commission's inclusion of Demand Side Management ("DSM") costs in Piedmont's expenses, that the circuit court violated the South Carolina Energy Conservation and Efficiency Act of 1992 ("Energy Act") by upholding the Commission's inclusion of DSM costs in Piedmont's expenses, and that the circuit court erred in stating in its order that the Consumer Advocate was not in a position to argue that the parties who signed the Integrated Resources Plan Stipulation ("IRP Stipulation") misinterpreted the agreement. The Consumer Advocate also argued that the Commission failed to set forth sufficient findings of fact to support its decision to allow Piedmont a return on common equity of 12.5%.

On August 31, 1998, the Supreme Court reversed in part and affirmed in part. With respect to the DSM issues, the Supreme Court held (1) that the Commission erred in including the DSM costs in Piedmont's expenses in this case because Piedmont did not demonstrate a cost/benefit analysis, (2) the circuit court did not violate the Energy Act by upholding the Commission's inclusion of DSM costs in Piedmont's expenses and (3) the

Consumer Advocate is not barred from asserting non-compliance with the IRP Stipulation.

With respect to the return on common equity, the Supreme Court held that the Commission failed to set forth sufficient findings of fact to support its decision to allow Piedmont to charge a rate of return on common equity of 12.5%. More specifically, the Supreme Court held that the record as a whole does not contain sufficient detail to allow the Court to make a meaningful review whether the findings are supported by the evidence and whether the law has been properly applied to those findings. The matter was remanded to the Commission for further proceedings in accordance with the Court's opinion.

II. DEMAND SIDE MANAGEMENT COSTS

In our November 7, 1995 Order, we permitted the Company to include $847,866 of DSM costs in its expenses. In its August 31, 1998 Decision, the Supreme Court reversed on the ground that Piedmont did not demonstrate a cost/benefit analysis. In order to comply with the Supreme Court's decision, we will require the following action:

1. Effective November 1, 1998, Piedmont shall reduce its rates by 3.476 cents per dt. to all customers to eliminate the $847,866 of annual DSM costs included in its rates ($855,217 of revenues).

2. The amount of DSM costs collected by Piedmont from the effective date of the rates until October of 1998 totals $2,565,651. The Commission Staff has calculated interest based on overall cost of capital of 10.77% on the cost collected to be $460,694. The Staff has calculated the total refund to be $3,026,345. Piedmont shall

credit the Gas Cost Deferred Account #253 by the amount of the refund, $3,026,345, and shall include such action in its monthly Gas Cost Deferred Account report.

3. Piedmont shall debit a regulatory asset account by the amount of the total costs incurred by the Company since the implementation of the DSM programs through the current date for the payment of DSM incentives and other DSM program costs. As provided in our previous orders, the regulatory asset account shall accrue interest at the approved rate of return.

The result of the above transactions is (a) to remove DSM costs from Piedmont's current rates, (b) to refund the full amount of the DSM collections to Piedmont's customers through an offset of gas costs that would otherwise be paid by such customers and (c) to preserve Piedmont's rights to recover through future rates the amortization of such regulatory asset in Piedmont's next general rate case upon a demonstration of a cost/benefit analysis for such expenses. This order is not intended to impose any greater burden on Piedmont than provided by our January 27, 1995 Order in Docket No. 93-787-G approving the IRP Stipulation. In that connection, we note that our January 27, 1995 Order contains the following language: "The failure of the Company to achieve the projected level of benefits for any specific DSM program, in and of itself, does not mean that the costs relating to the program are not recoverable."

We believe that the remedy set forth above not only complies with the Supreme Court's decision, it also complies with the position stated by the Consumer Advocate at the hearing of this proceeding. The Consumer Advocate's position on the recovery of DSM costs was presented by witness Annette L. Yontz. On cross-examination, Ms. Yontz testified as follows:

"Q. Am I correct that it's not the Consumer Advocate's position that Piedmont not be permitted to recover those costs, but only that it not be permitted to recover those costs in this specific case."

A. That's correct."

Finally, we note that the procedures will provide Piedmont an opportunity to recover its prudently incurred DSM costs and to earn the return which we have found, and affirm herein, to be fair and reasonable.

III. RETURN ON COMMON EQUITY

In our November 7, 1995 Order, we found that a fair and proper return on Piedmont's common equity is 12.5%. As stated above, the Supreme Court held that the Commission failed to set forth sufficient findings of fact to support its decision, and remanded the matter to the Commission for further proceedings in accordance with the Court's opinion.

In order to comply with the Court's remand, we will set forth (a) our findings and conclusions, (b) the evidence in the record of this case upon which our findings and conclusions are based, and (c) a discussion of our analysis of the relevant factors and our application of the law.

A. FINDINGS AND CONCLUSIONS

1. The determination of the appropriate rate of return on common equity for a public utility is not an exact science; instead, it is based upon experience and judgment.

2. The Discounted Cash Flow "DCF" methodology and the Capital Asset Pricing Model (CAPM) are useful tools for determining the appropriate rate of return on

common equity for Piedmont; however, different conclusions may result from the use of these methods depending upon the judgment of the person applying the methods.

3. In determining the allowed rate of return on common equity for Piedmont, it is appropriate to consider a number of factors, including the following: the rates of return of other enterprises and the reasonable opportunities for investment therein as measured, in part, by the results of the various DCF, CAPM and comparative earnings studies; the inherent protection against competition afforded the Company through the operation of the regulatory process as tempered by the shifting risks within the natural gas industry from the interstate transmission pipelines to the local distribution companies ("LDCs")resulting from the restructuring of the natural gas industry; the prices for which the Company's services must be rendered and the desirability of setting rates for a reasonable period of time; the public demand for the growth and system expansion which is required to maintain the construction program for the foreseeable future; and the financial policy and capital structure of the Company and its ability to attract capital to provide for such demand and system expansion.

4. It is not proper to make an adjustment to Piedmont's return on common equity based on the Company's weather normalization adjustment ("WNA").

5. It is appropriate to make an adjustment to rate of return on common equity for issuance or floatation costs.

6. Based on our careful analysis of all of the above factors, we find and conclude that the Company should be given a reasonable opportunity to earn a return on its common equity of 12.5%.

B. EVIDENCE UPON WHICH OUR FINDINGS AND CONCLUSIONS ARE BASED

1. Evidence upon which Finding and Conclusion No. 1 is based.

At the outset, we observe that the determination of the appropriate rate of return on common equity for a public utility is not an exact science; instead, it is based upon experience and judgment. See Phillips, The Regulation of Public Utilities, Second Edition, 1988, pp. 380-81. See also, Parker v. South Carolina Pub. Serv. Comm'n, 280 S.C. 310, 312, 313 S.E.2d 290, 291 (1984) ("Ratemaking is not an exact science, but a legislative function involving many questions of judgment and discretion."); Federal Power Commission v Natural Gas Pipeline Co. of America, 315 U.S. 575 (1942) (". . . the Commission was not bound to the use of any single formula or combination of formulae in determining rates. It's ratemaking function, moreover, involves the making of pragmatic adjustments."); Bluefield Water Works and Improvement Co. v. Public Serv. Comm'n of the State of West Virginia, 262 U.S. 679 (1923) ("What annual rate will constitute just compensation depends upon many circumstances and must be determined by the exercise of fair and reasonable judgment, having regard for all relevant facts."); Re Northwestern Bell Teleph. Co. (1974) 299 Minn. 1, 27, 216 NW2d 841 (1974) ("We have previously noted that the fixing of a fair rate of return cannot be determined with precision, since it is not derived from a formula, but must be reached through the exercise of reasonable judgment . . . ."); Re The New Haven Water Company, 6 PUR4th 166 (Ct. Pub. Util. Comm'n 1974) ("The problems involved in determining the cost of capital and its major components are in substantial measure matters of judgment. Necessarily, so many factors enter into a determination of fair rate of return that many judgments have to be made."); Re Savannah Electric and Power Company, 90 PUR4th 563 (Ga. Pub. Serv. Comm'n, 1985) ("As in most cases, the cost of Common Equity is not as easily determined as the cost of other elements of the capital structure.") See also, Southern Bell Tel. and Tel. Co. v. Public Serv. Comm'n of South Carolina, 270 S.C. 590, 244 S.E.2d 278 (1978). ("In determining the appropriate cost of Common Equity the Commission must weigh the testimonies of qualified experts and exercise its collective judgment as to what cost of Common Equity, once included in the ratemaking formula, would result in the Company having the opportunity to earn a fair return for its stockholders."); Re Maui Electric Company, Ltd., 153 PUR4th 437 (Hawaii Pub. Util. Comm'n 1994) ("The determination of a reasonable cost of equity is ultimately a matter of informed judgment."); Re Southwestern Bell Telephone Company, 42 PUR4th 89 (Kan. State Corp. Comm'n, 1981) ("As in every case, the evidence shows that estimates of cost of capital are largely a matter of judgment."); Re Trans-Canada Pipe Lines Ltd., (NEB, December 1971), pp. 6-2 6-3 ("One of the few things upon which the regulated industries, the regulatory agencies, and the courts which review their decisions have agreed is that the consideration of the two objectives, just and reasonable rates or prices to the consumer, and just and reasonable return to the regulated enterprise, is a function requiring informed and scrupulous judgment.").

Witness David Parcell, testifying for the Consumer Advocate, testified as follows: "Neither the courts nor economic/financial theory have developed exact and mechanical mechanisms for precisely determining the cost of capital. This is the

> case since the cost of capital is an opportunity cost and is prospective looking, which indicates it must be estimated."

(T. Vol. 2, p. 106). In addition all three of the rate of return witnesses testified that they used various means to "estimate" the appropriate rate of return on common equity for Piedmont, and all three witnesses offered an estimated range of appropriate returns.

Based on the above, we find and conclude that the fixing of a fair rate of return on common equity for Piedmont cannot be derived from a formula but must be determined through the exercise of reasonable judgment based on record evidence.

2. Evidence upon which Finding and Conclusion No. 2 is based.

All three witnesses used both the DCF and the CAPM methods to estimate the appropriate cost of common equity for Piedmont, and all three witnesses reached different conclusions. The reason for these different conclusions can be found, in part, in the testimony of Dr. James E. Spearman, testifying for the Staff. Dr. Spearman computed the expected cost of common equity based on the Value Line and the Merrill Lynch dividend growth and based on the Value Line and the Merrill Lynch earnings growth. He also used two different time periods. Dr. Spearman summarizes his expected returns on common equity as follows:

	Average
Moody's Gas Distribution Index	Return on Equity
DCF (dividend growth)	8.74% - 11.13%
DCF (earnings growth)	11.32% - 12.41%
CAPM (adjusted betas)	10.78% - 11.06%
CAPM (raw betas)	8.81%
Piedmont Natural Gas Company	
DCF (dividend growth)	10.29% - 11.11%
DCF (earnings growth)	9.77% - 13.23%
CAPM (adjusted betas)	10.58% - 10.92%%
CAPM (raw betas)	9.83%

The above table illustrates how different results can be reached even by the same witness depending upon the method used (i.e., DCF or CAPM) and the measure used for growth (i.e., dividends or earnings). The evidence in this case also shows that the source of the various components of the DCF model can have significant effect on the results. In his testimony, Dr. Donald A. Murry, testifying for Piedmont, contends that Dr. Spearman ignored the Merrill Lynch forecast of earnings growth which he cited in his schedule RD-9 and that if he had used that earnings growth, he would have reported a DCF cost of capital of 12.41% and 12.57%.

Both Mr. Parcell, testifying for the Consumer Advocate, and Dr. Murry, testifying for Piedmont, also used both a DCF method and a CAPM method to calculate an estimated return for Piedmont and reached varying results depending upon the various factors selected.

Based on the above, we find and conclude that although the DCF and the CAPM are useful tools for determining the appropriate rate of return on common equity for Piedmont, neither method is appropriate without further analysis. We also make the same finding and reach the same conclusion with respect to the comparable earnings analysis used by Mr. Parcell.

We also note that the above finding and conclusion is consistent with findings of other commissions. For example, in New York Telephone Company, 12 PUR 4th 1 (New York Pub. Serv. Comm'n, 1975), the New York Public Service Commission said:

> "The major item in controversy is the proper cost rate for common equity. The rate of return evidence submitted in this proceeding, reviewed in detail in the examiner's recommended decision, provides an adequate basis upon which to determine AT&T's cost of equity, notwithstanding the disparity observed in the conclusions of the various witnesses. The recommendations of these expert witnesses establish an equity cost range between 11 and 15 per cent. This relatively wide range, resulting from the conclusions of eminently qualified financial experts, serves to underscore the examiner's observation that the different techniques of measuring the cost of equity capital can provide, at best, only a useful guide for determining the fair rate of return. Clearly, there is no single mathematically precise method of ascertaining the cost of equity capital."

Likewise in Re Appalachian Power Company, 22 PUR 4th 548, (Virginia State Corp. Comm'n, 1977), the Virginia State Corporation Commission said:

> "There is a wide range in the recommendations of the rate of return expert witnesses. This relatively wide range, resulting from the conclusions of eminently qualified experts, serves to underscore what this commission has said often; viz., that notwithstanding the variety of techniques, and the sophistication

thereof, for measuring the cost of equity, there is no single, mathematically precise method of ascertaining its cost. The formulation of a fair and reasonable return is an art which requires informed judgment."

Finally, in Re Calgary Power Ltd., 34 PUR4th 398 (Alberta Pub. Util. Comm'n, 1980), the Alberta Public Utilities Commission said:

"There is no mathematically or scientifically exact approach or method for the determination of the 'fair return' on rate base which the board can use, particularly with respect to the fair return on that portion of the rate base which is assumed to be financed by common equity capital. The process and conclusion is highly judgmental and the recommendations of the various expert witnesses always seem to be in the direction of their client's bias, which the board considers to be normal and expected."

In this case, as in the cases cited above, there was a wide range in the recommendations of the expert witnesses, ranging from 10.75% on the low side to 13.25% on the high side. The various recommendations seemed to favor the witnesses' clients. As noted by the Alberta Public Utilities Commission, this result is normal and expected. It was partially in recognition of this normal and expected bias that we stated in our November 7, 1995 Order that we believed that the recommendations of the Commission Staff and Consumer Advocate were slightly on the low side and the recommendation of the witness representing the Company was slightly on the high side.

For all of the above reasons we find and conclude that the DCF methodology and the CAPM are useful tools for determining the appropriate rate of return on common equity for Piedmont; however, different results may result from the use of these methods depending upon the judgment of the person applying the methods.

3. Evidence upon which Finding and Conclusion No. 3 is based.

The various witnesses testified as to a number of factors that the Commission should consider in determining the appropriate rate of return on common equity for Piedmont. The factors include the following:

a. The rates of return of other enterprises and the reasonable opportunities for investment therein as measured, in part, by the results of the various DCF, CAPM and comparative earnings studies.

In Bluefield, the United States Supreme Court said:

> "A public utility is entitled to such rates as will permit it to earn a return on the value of the property which it employs for the convenience of the public equal to that generally being made at the same time and in the same general part of the country on investments in other business undertakings which are attended by corresponding risk and uncertainties . . .."

Each of the three cost of capital witnesses recognized the applicability of this principle. Dr. Murry testified:

> "A fair rate of return meets the standards set by the United States Supreme Court decision in the . . Bluefield case as further modified in the Federal Power Commission vs. Hope Natural Gas Company, 320 U.S. 591 (1944). . . ." That is to say, a rate of return which provides earnings to investors similar to alternative investments in companies of equivalent risk."

Dr. Spearman testified:

> "The cost of equity was estimated using the Discounted Cash Flow (DCF) model and the Capital Asset Pricing Model (CAPM). These models have been widely

used and recognized by this Commission in rate-making proceedings as consistent with the Bluefield and Hope decisions and are well documented in finance literature."

After citing the Bluefield and Hope decisions, Mr. Parcell testified:

"It is apparent that these standards reflect the economic criteria encompassed in the 'opportunity cost' principle of economics, which holds that a utility and its investors should be afforded an opportunity (not a guarantee) to earn a return commensurate with returns they could expect to achieve on investments of similar risk."

The above cited cases and testimony support our finding and conclusion that rates of return of other enterprises and the reasonable opportunities for investment therein as measured, in part, by the results of the various DCF, CAPM and comparative earnings studies are an appropriate factor for us to consider in determining a reasonable rate of return on common equity for Piedmont.

As hereinafter set forth in more detail, we considered the rates of return of other enterprises and the reasonable opportunities for investment therein by selecting a rate of return for Piedmont that is within many of the various ranges of rates of return for other enterprises as adjusted for Piedmont.

b. The inherent protection against competition afforded the Company through the operation of the regulatory process as tempered by the shifting risks within the natural gas industry from the interstate transmission pipelines to the LDCs resulting from the restructuring of the natural gas industry.

It is important to note that historically, LDCs have enjoyed a monopoly in the distribution of natural gas to consumers in their service territories. This monopoly has provided some protection against risks. This monopoly does not mean, however, that LDCs have been free from competition or free from risks. LDCs must compete with alternate fuels, other forms of energy and, more recently, with other gas suppliers.

As a result of FERC Order No. 636, LDCs will face higher risks. As set forth in Schedule DAM-R2, these risks include the availability of gas supplies, the deliverability of gas supplies, competition from other suppliers of gas and transportation, regulatory treatment of gas purchases and prices for gas purchases above current market levels.

All of the rate of return witnesses appear to recognize that the cost of capital and the related rate of return on common equity are affected by the risks of investing in the entity for whom the cost of capital or the rate of return is being determined. Therefore, we find and conclude that the inherent protection against competition afforded the Company through the operation of the regulatory process as tempered by the shifting risks within the natural gas industry from the interstate transmission pipelines to the LDCs resulting from the restructuring of the natural gas industry is an appropriate factor for us to consider in determining the reasonable rate of return on common equity for Piedmont.

As hereinafter set forth in more detail, we considered the risks of investing in Piedmont by allowing Piedmont an opportunity to earn a rate of return on the upper end of the reasonable range of returns to account for the shifting risks within the natural gas industry.

c. The prices for which the Company's services must be

> rendered and the desirability of setting rates for a reasonable period of time.

The prices for which the Company's services must be rendered and the desirability of setting rates for a reasonable period of time are relevant to the appropriate rate of return in several ways. As stated in Federal Power Commission v. Hope Natural Gas Company, 320 U.S. at 602-603 (1943), "[T]he fixing of 'just and reasonable' rates involves a balancing of the investor and the consumer interest." Furthermore, if the rates are high, consumers will turn to other sources of energy and, thereby, increase the risks to the Company. If rates are too low, the Company will be unable to recover its costs, including a reasonable return for investors, and the Company will be unable to raise capital to maintain and extend its services.

The desirability of setting rates for a reasonable period of time is generally recognized as one of the major criteria of a fair return. The criteria is set forth in Bonbright, Principles of Public Utility Rates, (Second Edition, 1988), p. 206, as follows:

> "If public utilities were required to raise and lower their rates year by year, with the object of maintaining a fixed annual rate of return, the resulting necessary changes in rate schedules would prove inconvenient alike to the ratepayers and to the corporate managements."

In addition, Dr. Murry, testifying for the Company, testified that "From a regulatory perspective, rates should be set to remain in effect for a reasonable time period; usually rates are set with the intent that they will be in force for several years."

For all of the above reasons, we find and conclude that the prices for which the Company's services must be rendered and the desirability of setting rates for a reasonable period of time are appropriate factors for us to consider in determining the reasonable rate of return on common equity for Piedmont.

As hereinafter set forth in more detail, we considered the prices of Piedmont's services and the desirability of setting rates for a reasonable period of time by recognizing that Piedmont is growing rapidly and must constantly raise new capital to support its growth. If Piedmont's rate of return (and, therefore, its rates) were set at the low end of a reasonable range of rates of return, Piedmont would be required to file repeated rate cases. For these reasons, we have allowed Piedmont an opportunity to earn a return at the upper end of a reasonable range of returns.

d. The public demand for the growth and system expansion which is required to maintain the construction program for the foreseeable future.

John H. Maxheim, Chairman, Chief Executive Officer and President of the Company, testified that the Company has added substantial plant in South Carolina in order to expand and improve its services, and that the additional capital expenditures represent a 42.59% increase in gas plant since Piedmont's last general rate case. Dr. Murry testified as follows:

> "P.N.G. is spending approximately $100 million to expand in the present and near term, and it is one of and probably the most rapidly growing gas distributors in the United States. The capital will not be available to the Company if its return is inadequate. The Company has obvious financing needs and a bond down-rating

would be extremely unfortunate and costly. The Company is at a 50-50 debt/equity ratio already. Falling below that level can jeopardize its 'A' rating."

As shown by Exhibit (RD-1), the Company has added a substantial number of customers during the same period of time. As set forth in the Company's verified application, the Company will be required to secure capital through the issuance of additional debt and equity securities that cannot be marketed on reasonable terms unless the Company has a reasonable opportunity to earn a fair and reasonable rate of return on its investment.

For all of the above reasons, we find and conclude that the public demand for the growth and system expansion which is required to maintain the construction program for the foreseeable future is an appropriate factor for us to consider in determining the reasonable rate of return on common equity for Piedmont.

As hereinafter set forth in more detail, we considered the public demand for Piedmont's services and Piedmont's requirements to provide additional capital and services to meet this public demand by allowing Piedmont an opportunity to earn a rate of return at the upper end of a reasonable range of rates of return.

e. The financial policy and capital structure of the Company and its ability to attract capital to provide for customer demand and system expansion.

In the November 7, 1995 Order, we found that a capital structure consisting of 45.81% long-term debt and 54.19% common equity was appropriate for use in this proceeding. No party appealed that finding. The financial policy and the capital structure are important since the total return the Company is entitled to earn is a combination of its cost of long-term debt (which all parties agreed was 8.72%) and its cost of common equity. Furthermore, as previously noted, Dr. Murry testified that Piedmont's "A" rating would be jeopardized if Piedmont's equity fell to below 50%. For these reasons, we find and conclude that the financial policy and capital structure of the Company and its ability to attract capital to provide for the demand of its customers and for the expansion of its system are appropriate factors for us to consider in determining the reasonable rate of return on common equity for Piedmont.

As hereinafter set forth in more detail, we considered Piedmont's financial policy and capital structure by allowing Piedmont a reasonable opportunity to earn a rate of return at the upper end of a reasonable range of rates of return. Our decision should permit Piedmont to continue to raise equity and debt capital in the future at reasonable rates, to maintain its current credit rating, and to continue to expand its gas distribution system in South Carolina.

4. Evidence upon which Finding and Conclusion No. 4 is based.

Mr. Parcell, testifying for the Consumer Advocate, recommended a reduction in the cost of equity of 25 basis points (0.25 percent) due to the fact that the Company has a WNA. Neither Dr. Spearman nor Dr. Murry made any adjustment to the cost of equity for the WNA.

Dr. Murry testified that the proposed adjustment to the rate of return on equity due to the existence of the WNA was unnecessary and inappropriate when one uses market-based measures for calculating the cost of common equity capital as all three cost of capital witnesses did in this case. He contends that to the extent that the WNA produces a reduction in risk, that reduction is already reflected in the market prices and that any further reduction would amount to doubling the effects in the change in risks. Dr. Murry also testified that it is not at all obvious that the weather normalization leads to a lower risk to the investors in the Company's common stock, since the WNA does not increase earnings over a period of time, but merely reduces the variability of earnings due to weather conditions.

Since the Consumer Advocate has alleged that Piedmont's rate of return on common equity should be reduced and Piedmont has disputed this allegation, it is important that we consider this factor in our determination of the reasonable rate of return on common equity for Piedmont.

As hereinafter set forth in more detail, we considered and rejected the Consumer Advocate's proposal.

5. Evidence upon which Finding and Conclusion No. 5 is based.

Dr. Spearman proposed an issuance adjustment of approximately 14 basis points. He arrived at this number by computing the cost of externally raised equity at 0.23% and then reducing it to reflect the fact that 38% of the new equity over the past five years came from retained earnings. Dr. Murry testified that the DCF methodology is a calculation of the marginal cost of capital and, therefore provides no regulatory protection against the vagaries of the market. He testified that a flotation (or issuance) adjustment is one mechanism for regulation to adjust for this limitation of the DCF. Dr. Murry, however, disagreed with the method used by Dr. Spearman to calculate the floatation adjustment, contending that it accounts only for the costs of issuance and not for the depression in the value of common stock when new common stock is issued.

Since the parties have different views on whether an adjustment for floatation cost is appropriate and the amount of such an adjustment if made, we have considered this matter, and, for the reasons hereinafter set forth, we find and conclude that it is proper to provide an allowance for a floatation cost.

6. Evidence upon which Finding and Conclusion No. 6 is based.

The evidence upon which Finding and Conclusion No. 6 is based include all of the evidence set forth in support of Findings and Conclusions Nos. 1 through 5 and the additional evidence set forth in the following discussion of our analysis of the relevant factors and our application of the law. This evidence is discussed in detail in the following section of this order.

C. ANALYSIS OF THE RELEVANT FACTORS AND APPLICATION OF THE LAW.

In the preceding sections of this order, we have set forth the various factors which we find and conclude to be relevant to our decision of the reasonable rate of return on common equity for Piedmont. In this section, we will analyze the evidence and explain how we applied the relevant factors and the law in determining the reasonable rate of return on common equity for Piedmont.

1. Recommendations of Cost of Capital Witnesses.

Each of the three cost of capital witnesses conducted a number of different DCF, CAPM and other methods to estimate Piedmont's cost of capital, and reached different results. In his prefiled testimony, Dr. Murry recommended a rate of return of 13.0% - 13.5% (which included an issuance or floatation cost); however, at the hearing, he testified that due to changes in the market conditions, he recommended the low end of his range or 13.0%. When pressed to give a range, he testified that his range would be 12.75% to 13.00%. Commission Staff witness Dr. Spearman testified that the current cost of the Company's common equity is between 11.25% and 11.75%, to which he would add an issuance or flotation costs of 0.14%. Consumer Advocate witness Mr. Parcell testified that the current costs of the gas distribution company groups is between 10.75% and 11.75%, but he would reduce the cost of Piedmont's return by 0.25% because of Piedmont's WNA. In the following paragraphs, we will examine these recommendations and the evidence upon which the recommendations are made. For the reasons set forth below, we believe there are flaws in each of the recommendations; therefore, we will not adopt any of the recommendations in their entirety. We will, however, consider each of these recommendations, the methods used by the various witnesses to reach their recommendations and the criticisms of these recommendations by other witnesses.

2. Consumer Advocate's Proposal for a WNA Adjustment.

We will begin our analysis of the various rate of return testimony by discussing Mr. Parcell's proposal to reduce Piedmont's rate of return by 0.25% because of his belief that Piedmont's risk is reduced as a result of its WNA. We reject this recommendation. We agree with Dr. Murry that this adjustment is unnecessary and inappropriate when one uses market-based measures for calculating the cost of common equity capital, as all three cost of capital witnesses did in this case. To the extent, if any, that the WNA produces a reduction in risk, that reduction is already reflected in the market prices and any further reduction would amount to doubling the effects of the change in risk. We also agree with Dr. Murry that it is unclear that the WNA leads to a lower risk to investors since the WNA does not increase earnings over a period of time, but merely reduces the variability of earnings due to weather.

3. Floatation Cost.

Next, we will consider Dr. Spearman's proposal to add an issuance or floatation cost of .14% to the recommended returns. Dr. Murry agreed that "Many analysts and regulatory bodies, for example, develop a measure of floatation costs and use that as an adder to the basis DCF calculation for the differential between the basic DCF and a recommended cost of capital for ratemaking purposes." Dr. Murry disagreed, however, with the 0.14% floatation costs suggested by Dr. Spearman. Dr. Murry testified that Dr. Spearman incorrectly reduced the calculated issuance cost of 0.23% by the amount of new capital that will be produced by retained earnings. We agree that it is proper to add an issuance or floatation cost of some amount to Dr. Spearman's recommended rate of return and to Mr. Parcell's recommended rate of return. It would not be appropriate to add any floatation cost to Dr. Murry's recommended rate of return since his recommendation already includes such cost.

4. Criticism of Various Cost of Capital Studies.

Next we will consider the criticisms of the various DCF and other studies. Dr. Spearman's studies are criticized as being excessively influenced by their reliance on historical data. Dr. Murry testified that Dr. Spearman has overly discounted the historical performance of Piedmont in his selection of growth rates used in his DCF analysis and has ignored these influences entirely in his CAPM analysis. Dr. Murry testified that had

Dr. Spearman used the Merrill Lynch earnings forecast for Piedmont, his recommended range would have been 12.41% and 12.57% plus the floatation adjustment.

Mr. Parcell's testimony with respect to his DCF studies is criticized for ignoring the impact on investors deciding whether or not to buy Piedmont stock. According to Dr. Murry, Mr. Parcell's DCF analysis is biased on the low side. With respect to Mr. Parcell's CAPM analysis, Dr. Murry contends that the 13% used for the entire market is too low as compared to the Value Line forecast which produces a total market return of 14.9%. Dr. Murry points out that changing just that one component of Mr. Parcell's calculation would raise his result by 1.09%. Thus, his range of 10.75% - 11.75% would increase to 11.84% to 12.84%.

Dr. Murry's testimony is criticized for using a 14.8% market total return which, according to Mr. Parcell, is the average of the 12.2% return for large company stocks (i.e., S&P 500) and 17.4% return for small company stocks (i.e, fifth capitalization quintile of New York Stock Exchange stocks). Mr. Parcell contends that it is improper to include the small stocks. Mr. Parcell also contends that Dr. Murry's reliance on the average returns for gas distribution companies of 13.48% since 1982 has little or no relevance at the current time and that the high end of the ranges of return on equity was only 12.8% in 1994.

All of the testimony and criticism illustrates one immutable fact. The various studies by the various witnesses all require a great deal of judgment and cannot be used as the sole basis for our determination of a fair and reasonable rate of return for Piedmont. Nevertheless, we believe that the testimony and criticism is instructive.

In our November 7, 1995 Order, we stated that we believed that Dr. Murry's analysis slightly overstates the cost of equity, and Dr. Spearman's and Mr. Parcell's analyses slightly understate the cost of equity. In making this statement, we considered a number of factors, including the following:

(i) With respect to Dr. Spearman, his range would have increased to 12.41% and 12.57% plus the floatation costs had he used the Merrill Lynch earnings forecast for Piedmont as recommended by Dr. Murry.

(ii) With respect to Mr. Parcell, his range would have been 11.84% to 12.84% had he used the total market return of 14.9% derived from the Value Line forecast in his CAPM study.

(iii) With respect to Dr. Murry, his recommended range of 12.75% to 13.0% would have been lowered had he placed more emphasis on the large company stocks and less emphasis on the small company stocks and had he placed more emphasis on the 1994 returns (the high end of which is 12.8%) rather than the average of the 1982 - 1995 returns.

(iv) As indicated above, we also considered the normal tendency for witnesses to provide ranges favorable to their clients' interests.

5. Other Factors Considered by the Commission.

We will consider some of the other factors that are appropriate for a determination of the appropriate rate of return on Piedmont's common equity.

(a) Rates of return of other enterprises with similar risks. We have already discussed the rates of return of other enterprises in our discussions of the various DCF and CAPM studies. Dr. Murry also presents us with another measure of rates of return.

Dr. Murry introduced his Schedule 23 to show the distribution of allowed rates of return for gas distribution companies since 1982. He pointed out that the mean is 13.48% and that the vast majority of allowed returns fall between 11.32% and 15.95%. Mr. Parcell criticizes Dr. Murry's use of the 1982 to 1995 allowed returns, contending out that the rates of return approved in 1994 ranged from 10.6% to 12.2%. Although we are not bound by the returns allowed by other regulatory agencies, we do recognize that Piedmont must compete with these other gas distribution companies when it sells common stock. We also recognize that because of its rapid growth, Piedmont must raise more capital and, thus, requires a higher rate of return, than most, if not all, of the other companies in the 1994 survey.

(b) Protection against competition versus the shift in risks within the natural gas industry. As previously noted, Piedmont has historically had a certain amount of protection against certain risks as a result of its monopoly distribution status; however, this protection has been eroding as a result of changes in the natural gas industry. We find that the additional risks Piedmont will experience as a result of the changes in the natural gas industry include the availability of gas supplies, the deliverability of gas supplies, and competition from other suppliers of gas and transportation. We also find that these risks are greater for a company like Piedmont that is rapidly adding customers and must continually provide gas supplies and deliverability of those gas supplies for its expanding customer base. These risks justify a return on common equity at the high end of a reasonable range.

(c) Prices of Piedmont's services and the desirability of setting rates for a reasonable period of time. As stated in the Hope case, it is the end result reached, not the method employed, which is controlling, and, in reaching that result, we must balance the interests of both the investor and the consumer. In that connection, we have considered the fact that Piedmont's rates are not out-of-line with other gas utilities in South Carolina, and, in fact, are less than the other large gas utility operating in South Carolina. Piedmont's rapid growth is evidence that its rates have been found to be fair and reasonable by its customers.

As previously stated, frequent changes in rates would be inconvenient for both ratepayers and the Company. In that connection, we note that Piedmont has been investing considerable amounts of capital each year to add facilities and customers in South Carolina. If we were to set a rate of return at the low end of the reasonable range of returns, it can reasonably be expected to cause Piedmont to file more frequent rate cases. This is one of the reasons we believe Piedmont should be permitted to earn at the higher end of the reasonable range.

(d) The public demand for growth and the need for capital to support that growth. As stated above, Piedmont has increased its gas plant by 42.59% since 1991. As stated in the Company's verified application, the Company will be required to secure capital through the issuance of additional debt and equity securities to maintain this growth rate. We find that the need for this new capital for providing additional services to South Carolina customers justifies the allowance of a rate of return at the high end of a reasonable range. If Piedmont's return is too low, it will have difficulty obtaining capital at reasonable costs to support its continued growth.

(e) Financial policy and capital structure. As noted above, Piedmont's capital structure consists of 45.81% long-term debt and 54.19% common equity. This capital structure was not opposed by any party, and it has resulted in a favorable debt rating for Piedmont. As noted above, Dr. Murry testified that reducing the equity portion of Piedmont's capital structure below 50% would jeopardize its current "A" bond rating.

IV. CONCLUSION

As noted at the outset of our discussion of the appropriate rate of return on common equity for Piedmont, the fixing of a fair rate of return cannot be determined with precision, since it is not derived from a formula, but must be reached through the exercise of reasonable judgment. Nevertheless, we have weighed the testimonies of qualified experts and we have exercised our collective judgment as to what rate of return on common equity, once included in the ratemaking formula, would permit Piedmont to continue to provide adequate service to its existing and new customers and to have the opportunity to earn a fair return for its stockholders. We have set forth the various factors considered by the Commission, and we have explained how each of these factors affected our ultimate decision.

Based on our analysis set forth above, we find and conclude that a broad range of reasonable rates of return for Piedmont is 11.75% -12.75%. The low end of this range is set by the high end of the recommendations of Dr. Spearman and Mr. Parcell, without a reduction for the WNA. We have selected the high end on these two ranges because we believe that the high end is more reflective of recent financial data and to recent changes in the natural gas industry. The top end of this range is set by the low end of Dr. Murry's range. We have selected the low end of Dr. Murry's range because we believe that his analysis placed too little emphasis on the large company stocks and too much emphasis on the small company stocks and that he placed too much emphasis on the average of the 1982 - 1995 returns on equity.

The mid-point of this broad range of reasonableness is 12.25%. We have increased the mid-point by .25% to provide for floatation costs and to account for Piedmont's high customer growth rate and its need for capital to support that growth rate, the need to provide protection against the shift in risks within the natural gas industry, and the desirability of avoiding frequent rate changes.

We have not attempted to assign a specific weight to each of the factors considered by us because we do not believe it would be possible to do so in a meaningful fashion. In general, we have relied upon the testimony of the experts, adjusted to reflect what we believe to be valid criticism of other experts. We have tested our conclusion against the various ranges offered into evidence, and we have concluded that our 12.5% is in line with many of those ranges.

It is instructive to note that our allowed rate of return of 12.5% is almost exactly in the middle of Dr. Spearman's range as adjusted by Dr. Murry, is within Mr. Parcell's range as adjusted by Dr. Murry, and would be at the high end of Dr. Murry's recommendation if that recommendation were to be reduced by 0.5% to account, in part, for the criticism by Mr. Parcell. We also note that our allowed 12.5% falls within the range of the vast majority of allowed rates of return since 1982.

The allowed rate of return of 12.5% is also within a number of other ranges offered in evidence. For example, Exhibit RD-11, Page 2 shows a range for Piedmont of 9.90% - 13.07%, and Exhibit DAM-1, Schedule 23, shows a range of 11.32% - 15.98%

for the vast majority of the rates of returns for gas distribution companies over the period June, 1982 - February, 1995. At the hearing, Dr. Spearman summarized his DCF testimony as follows:

> "Two forms of the DCF Model were utilized, a basic constant annual growth model and a quarterly growth model. Both dividend growth rates and earnings growth rates as report by Value Line and Merrill Lynch were used. The DCF analysis was applied to Piedmont Natural Gas Company and the Moody's Natural Gas Distribution Index as a comparison group. These models produced estimated returns on equity in the range of approximately 9.0 percent to 13.0 percent."

Although, standing alone, none of the ranges set forth above are appropriate for setting a rate of return on common equity for Piedmont, when considered together, they show that the 12.5% return approved for Piedmont falls within all of these ranges.

We do not intend to indicate that we are not aware that other ranges presented at the hearing do not include 12.5%; however, we do not believe that those other ranges indicate that the 12.5% is inappropriate. As pointed out by Dr. Murry, the DCF methodology is a calculation of the marginal cost of capital and provides no regulatory protection against the vagaries of the market. Furthermore, the recommendations of both Dr. Murry and Dr. Spearman exceed a number of these lower ranges. Finally, as noted above, we believe that Piedmont should be allowed a return at the high end of a reasonable return because of its high growth rate and its need for capital to support that growth rate, the need to provide protection against the shift in risks within the natural gas industry, and the desirability of avoiding frequent rate changes.

For all of the above reasons, the Commission finds and concludes that the Company should be given a reasonable opportunity to earn a rate of return on its common equity of 12.5%. We find that this rate of return is sufficient to protect the financial integrity of the Company, to preserve the property of the investor, and to permit the Company to continue to provide reliable service to present and future customers at reasonable rates. We also find and conclude that when overall return of 10.77% which results from the use of the approved capital structure, the 8.72% cost of long-term debt and the 12.5% rate of return on common equity is just and reasonable to the Company and to its ratepayers.

IT IS THEREFORE ORDERED:

1. That Piedmont take the action with respect to its DSM expenses set forth in Section II of this Order.

2. The allowance of a 12.5% return on common equity for Piedmont be, and the same hereby, is affirmed.

3. That except as set forth in this order, our November 7, 1995 Order is affirmed.

4. That this Order shall remain in full force and effect until further Order of the Commission.

BY ORDER OF THE COMMISSION:

Philip T. Bradley

Chairman

ATTEST:

Gary E Walsh

Executive Director

(SEAL)